THE UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

PUBLIC HEARING

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IN THE MATTER OF THE

DOUGLAS ROAD LANDFILL

SUPERFUND SITE

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TRANSCRIPT OF PROCEEDINGS had at The United States Environmental Protection Agency Public Hearing regarding the Douglas Road Landfill Superfund Site, conducted at Walt Disney Elementary School, 4015 North Firlbert Road, Mishawaka, Indiana, on Wednesday, April 5, 1995, commencing at 7:00 p.m.

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P R E S E N T

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(Meeting commenced at 7:00 p.m.)

MS. LaFAIRE: Before we start, I just wanted to mention this woman in the front in the checkered coat is our court reporter. She's going to be recording this meeting, because this is the portion of the process where we're asking for comments about the remedies and the recommended alternatives. So everything that's said at this meeting, and everything that you say, will be considered part of the official record for tonight. So that's what this woman will be doing through the whole meeting. With me tonight is Holly Grejda, from the Indiana Department of Engironmental Management, and Dion Novak, EPA's Project Manager.

I'll just go through briefly what we'll be doing tonight.

First, Holly will tell you a little bit about the history of the site. Then Dion will get into the recommendations we have for the site and EPA's recommended alternative. And then after that we'll open up for a brief, maybe twenty minute half an hour, question and answer session. And then after that I have a list up there that says Comments. That's the time in the meeting when anybody who has an official comment can stand up and

say, "Hi. I'm John Smith, I live at non-responsive and this is what I think about the recommended alternative, about the other alternative, and about what should be done at the site." And that's the official comment time.

So before we actually begin this meeting, because I think we're going to zip right through it and not call a break, I'm going to ask anybody who may want to sign up -- is there anybody who may want to sign up for official comment at this time who hasn't signed up on the list?

UNKNOWN: I may be. I don't know.

MS. LaFAIRE: Okay. That's what I was going to say. The other point is, if you didn't sign up on the list when we get to that portion after question and answer I'll ask you that question again and give you the opportunity to sign up to make an official comment. So if you didn't sign up, and you think that you might, there's still plenty of time.

Also, many of you -- some people said they didn't receive this book. Most of you did receive this fact sheet. And if you don't have it, there's some up in the front. There's a page in here that asks for official comment. If you're here tonight to gather information and you care to just write your comments down on the sheet and

mail it to us, that's fine, too. So there's still plenty of time to send us a written comment.

And with that I'm going to introduce Holly Grejda, from IDEM:

MS. GREJDA: Good evening. I'm here to give you a little bit of information about the history of the project. For a while the State was in the lead. The site itself covers approximately sixteen acres near the intersection of Douglas and Grape Road near Mishawaka. The landfill is now owned by Uniroyal, Incorporated, and was operated between 1954 and 1979. From 1954 to 1971 solvent, fly ash, paper, wood stock, rubber and plastic scrape were disposed of at the unlined landfill.

In 1970 the Indiana Stream Polution Control Board advised Uniroyal to stop sending solvents to the landfill because a nearby residential well was thought to be contaminated with solvent. Only fly ash and some scrap rubber was disposed of from 1971 to 1979. In addition, the Board requested that Uniroyal install six monitoring wells to sample ground water at the site.

Uniroyal ceased landfill operations in 1979. A new ground water monitoring well was installed, existing wells were closed due to poor conditions, and the site was covered and seeded. The site was officially closed in December of 1980.

Uniroyal purchased the site property in 1981. In 1984 the United States Environmental Protection Agency conducted what's known as a site inspection to determine if the landfill might pose a threat to human health and/or the environment. The inspection concluded that there was a potential for said related contamination to adversely impact the surrounding community.

The site was proposed for inclusion on the National Priorities List in 1986 and finalized on the list in 1989. The National Priorities List is a roster of the nation's most serious hazardous waste sites. The sites on the National Priorities List are eligible for investigation and cleanup under the Superfund Program.

The State started negotiations with Uniroyal in April of 1989 to begin cleanup. In September of 1989 the State and Uniroyal signed a Consent Decree in which Uniroyal agreed to conduct their remedial investigation and feasibility study.

In November of 1991 Uniroyal filed for bankruptcy under Chapter 7. In January of 1992 the Attorney General of Indiana was notified by Uniroyal that they would not be fulfilling their obligations under the Consent Decree.

Once that occurred IDEM and U.S. EPA got together to discuss who should take the lead on the

ground water monitoring wells which would give us the official indication of whether there was contamination there.

We took the geo probe samples from about twenty locations. At each location we took two or three samples. So we took fifty or sixty total samples using that instrument. Following the receipt of that information we located twenty-two monitoring well locations, which is where we stuck a pipe in the ground and actually pulled the ground water sample out and sent that away to be analyzed to see whether it was contaminated or not.

In the process of doing the ground water investigation we also typically do residential wells, where we identify houses that are drinking residential well water. We typically do residential well sampling in the area that we believe could be impacted. And in this instance we found contamination on Douglas Road. Following that -- we found that last summer.

Following that we started doing a kind of sequential sampling. We did six sampling events when we went out, and we sampled about seventy or seventy-five homes trying to get an idea of where the contamination was. We have about fifteen wells that are contaminated at the present time out of this seventy or seventy-five wells that were sampled.

We collected surficial soil samples at the landfill, we just scooped up soil from the surface of the ground, and we sent that away to be analyzed to determine whether that was contaminated or not.

We did an ecological survey which was are there any ecological impacts from the site to the birds, to the animals, to things like that -- wild life.

And then we took all of the information, all the samples that we got, and did what's known as a risk assessment where we used calculations to determine whether the levels of contamination that we found posed unacceptable risks to either humans or the environment.

This is where we get to show off some of our graphics capabilities. Some of you have seen this, some of you haven't. I'm doing a real good job of trashing this as I carry it around.

(Places diagram up front)

This is the site right here. The colored areas are the areas were we have detected ground water contamination. We have ground water contamination moving to the south and southwest -- I'm sorry -- west and southwest, away from the site.

This is where the bulk of the residential well contamination is. It's down [redacted] We've also got a couple of

contaminated wells here, close to the [non-responsive] as well as one down here right off of [redacted]

All of these other dots in here are the other wells that we sampled, and all of these -- ND means not detected, which means there wasn't any contamination detected in those locations. And you can come up and take a look at this after the meeting.

That map right over there gives you a little better picture of how many wells we sampled and, as you can see, we sampled quite a bit. And we feel pretty confident that the results that we have have given us a pretty good handle on exactly where the ground water contamination is. And again, I'll leave this up here so you can come and take a look at it.

I asked those maps to be blown up so they'd be a little bigger than they were, and they blew them up for me -- life size.

Following the receipt of the sample results we decided to split up the cleanup of the Douglas Road site into three phases. The first phase, which many of you are aware of, and we been out having meetings in the past talking about it, is the city water line extension which we determined is the best fix for the residential well contamination that we found. The second phase, which is

the landfill cap, is the reason we're here today and the reason that you got the proposed cleanup alternative. That's for the landfill cap phase. And then Phase 3 is the ground water cleanup. Once we separate the people from the risk of drinking the contaminated ground water then we will go back in and we will clean up the ground water to acceptable Federal and State standards.

Following that we do what's known as a feasibility study, which is we analyze the feasibility of various cleanup alternatives to best fix the contamination problem that we have out here. For this particular phase, putting a cap over the top of the landfill, we looked at six alternatives.

The first alternative we looked at is no action. And that's just as it says, we don't do anything. We're required by law to evaluate the no action alternative so we can compare the other things we look at to that.

Alternative 2 is a soil cap, where we just go out there and put soil on top of the landfill itself on top of the sixteen acres. That, as you can see in the table in the proposed plan, is $2.4 million to do that over the entire sixteen acres, take about two months to do that.

Alternative 3A is a single barrier cap with a compacted clay soil barrier layer. That's kind of a

mouthful. What that is, is that's a cap which is composed of a discreet cross section of clay that's compacted -- squished together. We put that over the top, and then we cover that up with dirt. And the purpose of the clay is to prevent rainwater from sinking down into the landfill and coming into contact with the stuff that's in the landfill.

Alternative 3B and Alternative 3A is $5.4 million, and it will take approximately four months to construct.

Alternative 3B is a single barrier cap with a GCL barrier layer. GCL stands for geosynthetic clay liner. And what that is, it's kind of like a rubber liner that acts like a certain cross section of clay. It's the same purpose. It will limit the amount of rainwater that can sink down into the landfill contents. And that's also covered with soil. I'll get to that -- I've got a couple overheads in a little while that will give you a little better cross section of what that actually is. That remedy would take about three months and cost $4.5 million.

Alternative 4A is what's known as a composite barrier cap with a compacted clay soil barrier. And what that is, is that's -- while the other Alternatives 3A and 3B were single barriers, were single layers of

infiltration protection, Alternative 4A has two layers. Alternative 4A has kind of like a geomembrane liner, which is kind of like -- again like a rubber layer which is going to be placed on top of a certain cross section of clay -- compacted clay, and that gives you double protection against the amount of water that can sink down into the landfill. That alternative would take five months to construct and would cost $5.8 million.

Alternative 4B is composite barrier cap with a GCL soil barrier layer. What that is, is that's going to be the geosynthetic clay liner which is kind of, like I said, like a rubber liner overlaid by another one. So again you get double protection there against rainwater infiltration. That will take about four months to construct and cost $4.7 million.

As you're probably thinking, these aren't cheap. And it's unfortunate that these alternatives cost as much as they do. And it's also unfortunate that Uniroyal is not a viable entity to help to cleanup the site that they contributed to the pollution of. But, unfortunately, Superfund is very costly. That just goes to show that it's cheaper and better to dispose of things before you put them in the ground.

(Projects diagram on screen)

These are in the Feasibility Study Report, which

is at the library. And what these are, these are cross sections which show exactly the various components of the alternatives that I just described. As you can see, Alternative 1, no action, here's the contaminated soil (indicating). There's nothing on top of it.

Alternative 2, the soil cover, we have the contaminated soil covered with dirt -- covered with soil. That's the soil cover.

Alternative 3A is covered with the compacted clay, which I mentioned, as well as some other cover layers composed mainly of dirt. And again, you can see, if you want to come up and take a look at these after the meeting -- or during the meeting, that would be fine. These just are pictorial representations of what I described. Basically there are a number of layers of each of these caps that will be utilized both to protect people from coming in contact with the soil as well as to protect any rainwater from filtering down into the soil and becoming contaminated by the stuff that's there.

I will put this up, and I will be getting to the remedy that we're proposing tonight. That is this remedy right here, Alternative 4B. And I will -- I think I have another overhead which displays it a little bit better. Now is when I hope I don't lose you, because this is when we start getting into Superfund technology -- Superfund

lingo, I mean.

We have three ways to evaluate the alternatives that we look at for our sites, three categories that we use. The first are called the threshold criteria. All alternatives that we look at have to satisfy these two criteria, otherwise we can't -- we're precluded from looking at them any further.

The first one is overall protection of public health and the environment. That is, as it states, we are supposed to make sure that the alternative we look at will protect the people that could come in contact with the site and the contaminates that are there. Compliance with ARARs. That's not any type of slang term. What that stands for is Applicable or Relevant and Appropriate Requirements. What that is, besides a mouthful, and I can't even say it half the time, is those are State and Federal standards that we have in place to make sure that our remedies comply with them to make sure that they are protected. These two again -- these two criteria, the threshold criteria, are criteria that each alternative has to meet. Now, you'll probably think, "Well, you talked about no action." We're required by law again to look at a no action to give us something to compare the other alterntives to so we can say, "Well, if we did nothing these are the risks associated with it. If we do

something, compared to doing nothing, this is the benefits."

The second -- so once we get through the first two criteria, and we get a group of alternatives that will satisfy them and be protective and be in compliance with all the rules and regulations from both the Federal and State level, we go through the second set, which is called the balancing criteria. This is what we use to compare the alternatives amongst each other to see which one is the best one so that we can end up with a proposed alternative as you're looking at it right now.

There are five of them listed here. Long term effectiveness and permanence is just that. We want to make sure that the remedy that is selected is effective in the long term, not only short term but in the long term, and we want to make sure it is as permanent as possible.

No. 4, reduction of toxicity, mobility or volume of contaminants, is a fancy way of saying we want to make it impossible for toxicity, we want to make it less dangerous. Mobility, we want to limit the ability for the contaminants to move away from the site. And the volume, we want to decrease the volume of contaminants if we can.

No. 5, short term effectiveness. What are the short term risks associated with the construction of the alternative both to people who are actually implementing

the remedy as well as people who live near the site.

Implementability. No. 6. How implementable is it? Is the technology that we're looking at -- is it something that we've done before that we know works? Is it something that somebody dreamed up and said, "Well, this might work, and we don't know whether it's going to work or not so we have to do a bunch of testing"? That's how implementable it is.

And No. 7, cost. We have to look at cost, and we have to choose -- if we have two alternatives that provide the same level of protectiveness we have to choose the most cost effective one. That's also in the law. There's only so much money in the Superfund.

Those first seven criteria were used to develop the proposed plan that you're all looking at. These last two are in the third category, which is called the modifying criteria, State acceptance -- Holly, the State of Indiana Department of Environmental Management -- and, No. 9, community acceptance -- you.

We come out and we say, "This is what we propose to fix the problem -- to fix this particular problem. What do you think?" And here's your opportunity to say, "Well, yes, we agree this is a great idea," or, "No, that's a dumb idea. You should do something else." This is your opportunity to tell us that.

The remedy selection process. EPA selects the preferred alternative. That's what you have. The support agency, in this case the State of Indiana, has commented on this. As you see under the table they support the recommendation that we did make. Follow the arrows down to this box, which is public comment on all alternatives. Here's your chance again to look at the alternatives we evaluated and say, "Yes, we agree," or, "No, we don't agree." I would encourage you in your comments, if you're going to be making formal comments, if you don't like the alternative that we've proposed and you like another one please tell us why. It makes it easier for me to respond to if you say, "Well, I like Alternative 1 because I feel it's better." It makes it easier to respond to.

Following all that -- the public comment period which started March the 23rd and it will end April the 24th, as listed on the front of that -- following that we evaluate all the comments that we received and then we put out what's called a Record of Decision. And that is the final cleanup plan for this particular phase of the cleanup. The official agency -- EPA document that says, "This is the best alternative for this particular phase of cleanup." We have to respond to the comments, and I will -- I have an overhead on that in a minute -- and we also get -- the State of Indiana will also provide comments on

that Record of Decision as well. It's a very long and very thick document, typically anywhere from seventy to hundred pages. It takes a while to write. I can vouch for that.

Here is the selected remedy. Alternative 4B. The composite barrier cap with the geosynthetic clay liner, or the GCL liner. That's the alternative that we propose as the most effective alternative out of the ones that are listed in that table. The reasons -- as you see in the table, we used a criteria to evaluate amongst the six alternatives to come up with this recommendation. Based on what's in the table we evaluated that Alternatives 3A, 3B, 4A and 4B would be the best out of the six in order to accomplish the objectives of this particular phase of the cleanup.

We determined that Alternatives 3B and 4B were better than 3A and 4A because they provided greater protection against the infiltration of rainwater into the landfill contents and the lack of what we could determine at the time was a suitable available clay source in the area. Could we get clay in the area that would be suitable for putting over the top of the fill? Based on the information that we had we didn't find that. So that's another reason why we selected -- we went 3B and 4B as being better than 3A and 4A.

We then determined that 4B, which is the one we selected, was better than 3B primarily because of the greater protection against ground -- rainwater infiltration. What that's going to do is that's going to decrease the volume of contaminated ground water that's going to be coming away from the site that we're going to have to deal with in the next phase which, as you recall, was clean up the ground water. By reducing the amount of water that goes into the landfill and comes into contact with the contaminated soil on the site means that we have less ground water to treat. So that's going to save us time and it's going to save us money in the long run to completely clean up the ground water.

Another reason, again, was the lack of a locally available source of clay. It will be shorter -- a little shorter to implement this particular alternative than Alternative 3B. We're going to be getting -- and I will get into this in a little bit -- we're going to be getting started this fall on the construction of this particular landfill cap. So from what we understand September, October is a pretty rainy time here, and we want to try to get this done as quickly as we can. It is going to be easier to implement because of the materials that we're going to be using because -- again, because of the fall construction time frame the materials in Alternative 4B

are going to be a little easier to manipulate. Putting like a rubber liner over the top is a little bit easier to put in place than actually taking a bunch of clay and compacting it.

Long term effectiveness. We determined that 4B was a little better than 3B in the long term due to freeze thaw. It provides a little more resistance to the freeze thaw effects of the winter than the 3B. There's less effects on the geosynthetic clay liner than there would be on the clay layer. That particular alternative again, as I mentioned before, costs $4.7 million and it's going to take about four months to construct.

To provide you a little bit of an overview for those who aren't familiar, who haven't been to some of our prior meetings, this is what we're doing for the Douglas Road site. Phase One -- what we're here for tonight is for Phase Two. Phase One is the city water hook up. And, again, a lot of you are aware of that. We just recently, and by recently I mean about two weeks ago, procured the money to do that. So we received the money in our offices to be able to start the design of that particular project. It's $1.2 million to do that. The design is underway. We're lucky that we got another site in Mishawaka called the Galen Myers (phonetic) site, which is coming to conclusion, that we can base this on because it's a

similar project. We're hoping to get to contractor selection somewhere around the first of June, so we'll actually be able to bid out the work and have somebody selected to actually do the construction of that in the June time frame of this year. The construction -- the actual construction of the city water line will happen this summer and fall. We're going to be done with that this year before the winter.

Phase 2. That's the first phase. Phase 2, which is the landfill cap, which is why we're here tonight, is going to be done -- the construction's going to be done by November. Again before the cold weather hits.

Phase 3, which is the ground water cleanup, we're going to get to the Record of Decision, which I mentioned a few minutes ago, this fall for the ground water portion of the cleanup. We'll do the design of that system -- whatever that system will be we'll do the design of that throughout the winter and have that ready by the spring and then we'll be out next spring -- sometime next spring summer to actually construct that component of the cleanup. So it's my hope that by the end of next summer fall, by the end of next construction season, we'll be done and we'll say we are done, which is -- a typical EPA cleanup takes about ten to twelve years and this one will

take, by the time we're done, two. That's good. That's very good.

The next steps. What happens next. The public comment period March 23rd through April 24th. We're in the public comment period now as we speak. The response and the summary, which is where EPA formally responds to the comments that we receive during the comment period from anybody who chooses to make a comment. We officially have to produce what's known as a Response in a summary where we list all substantive comments and our responses to them. "Yes, we considered it." "We agree with you," or, "We don't agree with you." We have to officially attach that to the Record of Decision which, as I mentioned, is the final cleanup plan for this particular phase. Following that remedial design or remedial action we design in this case the landfill cap and then we construct it. And, as I mentioned before, our plans are to be done before winter of this year of this phase. That's all I have. Thanks.

MS. LaFAIRE: At this time we'll open it up for questions.

QUESTION: What is the life expectancy of the GC liner?

MR. NOVAK: All the alternatives that we evaluated we evaluate for a minimum period of thirty years. We come

back and monitor the constructed remedy for that period of time on a continual basis. And then we come back every five years -- we're required by the Superfund law to come back and look at these constructed alternatives on a minimum of every five years. We'll be out more frequently than that. Plus we're leaving waste in place we have to come back in perpetuity, or at least until Superfund's -- I don't know whether Superfund is going to get reauthorized or not -- but we come back at least every five years to make sure that the remedy is still continuing to work.

QUESTION: But that's the entire package. The thirty year monitoring is the entire package. But what is the life expectancy of the geosynthetic?

MR. NOVAK: About the same. About the same amount.

QUESTION: How much top soil is on right now? Will that have to be stripped off and start with these layers, or do you just go over the top of what's on there now?

MR. NOVAK: What we're going to do -- you're going to see some activity out there later this month and early next month. We're going to cut down all the trees that are on top of there, because we can't have those in place. Those would affect the integrity of any cap that we put on top. That's the first thing we're going to do. We're going to grind all those up and put them on top of the

dirt that's already there. Then we're going to start constructing the cap above that. So we're not going to be digging into the landfill, we're going to place everything over the top.

QUESTION: On city water. Have you contacted both Mishawaka and South Bend?

MR. NOVAK: Yes.

QUESTION: In other words South Bend -- a few of us will be going on that?

MR. NOVAK: Yes.

QUESTION: So do you have something definite from South Bend?

MR. NOVAK: Yeah. What we're going to do is -- my plans are to come out probably later this month and do -- maybe do door to door in the area and just say, "Here's some information that we have." We discussed this at our last meeting as far as the things that we're going to need from the people that hook up to the City water, one of which is their signature on a Remonstration Agreement. And we will be bringing those out -- they'll also be available probably here sometime in the next -- sometime in April or May. We'll probably do it more than once, to have people come in and say, "Here's the forms that you need to sign." We can explain those to you and help you to answer any questions you have before you sign up for

the city water if you so choose. But, yes, we have been in contact with both cities and they -- because we're right in the middle they have agreed to split.

QUESTION: Will that come before, during, or after the alternative you selected?

MR. NOVAK: This alternative will be selected at the end of the comment period, like at the end of April. April 24th. I'll be out here probably sometime right in that same time frame with this material. But actually -- when we actually start constructing it will probably be after the remedy is selected for this. But both of them are going to be constructed in the summer fall time frame of this year.

QUESTION: Is the primary objective of this capping reduction of risk from surface exposure or reduction in risk from ground water?

MR. NOVAK: Both. Primarily from surface soil risk -- exposure to surface soils. That's why we put a cap over the top. But this cap will also help us in treating the ground water because there will be less contaminated ground water treatment because there will be less water sinking through the waste. So it's a dual purpose.

QUESTION: You said life expectancy is only thirty years on that cap?

MR. NOVAK: Yes. But what we're going to be doing is

-- because we are leaving waste in place we are going to be coming back and monitoring for a long time.

QUESTION: Maybe I don't understand you. The plastic cap you're putting on there, it's only good for thirty years? That's all they'll guarantee that cap for?

MR. NOVAK: We don't have enough time into Superfunds to see how long these things are going to -- we've got these in place at other sites. We haven't been in place for thirty years yet. But what we are going to be doing is we're going to be having a long term monitoring program to come out to make sure that it continues to do what we want it to do.

QUESTION: Well, how long is Superfund -- you said if it stays. How long is it right now?

MR. NOVAK: Well, they're talking about reauthorizing Superfund again in Congress right now.

QUESTION: They want to cut it out right now.

QUESTION: Yeah. How many years will it go for if they reauthorize it?

MR. NOVAK: It was for five years the last time -- four or five.

QUESTION: So say it doesn't get reauthorized, you put this cap on there, who monitors this for the next thirty years after the Superfund's gone?

MR. NOVAK: The State of Indiana will be monitoring

it. They'll do the long term operation and maintenance.

MS GREJDA: Once the remedy is constructed and in place then the State takes over the operation and maintenance. So we come back and we keep the grass down and we ensure that there haven't been any animals burrowing into the cap.

QUESTION: Has somebody thought about maybe possibly termites if you're going to grind all those trees up? This could be a humongous termite problem.

MR. NOVAK: That's something we're going to have to take care of, yes.

QUESTION: Termites are in the ground all around the world.

MR. NOVAK: But just to answer your question, long term the State of Indiana through the agreement that we have will be doing the long term operation and maintenance. So if I go away Holly will still be here.

QUESTION: It was just a question.

MS. LaFAIRE: Is there another question? Do you have a question?

QUESTION: Are there any theories as to why there are the two remote plumes to the west of the major plume? I noticed on the map there's two smaller plumes.

MR. NOVAK: No. That happens a lot that we don't have distinct containment. And those lines themselves

there are like contour lines. That doesn't mean the entire area in there is contaminated, it's just a pictorial representation. No, we don't have any explanation. This is not uncommon.

QUESTION: But you think it's part of the problem?

MR. NOVAK: Yes. That's why we're going to be sending the city water line out to encompass those as well.

MS. LaFAIRE: Question?

QUESTION: Couldn't that entire area become contaminated at a later date?

MR. NOVAK: That's a possibility. And that's one of the reasons why we're going to be -- after we put all these phases to cleanup in place we're going to be monitoring over the long term to make sure that that doesn't happen. If it does, then we would take steps at that time to address that, kind of similar to what we're doing right now.

QUESTION: Also, you mentioned about the clay not being available in this area. Couldn't you bring clay in from another area if that would be better?

MR. NOVAK: We could. I mean, it's got to have the right characteristics to prevent the water from sinking into it. It also has to be in an area that we can get to. We have to pay to dig it up and to bring it over. And

that all costs a lot of money to do that. That's why when we do stuff like this we look for a locally available one, because that helps to keep the cost down. Keep in mind that EPA is footing the bill for this.

MS. LaFAIRE: Quesion.

QUESTION: These chemicals that are in the ground right now, are they interacting with each other, fermenting or anything down there that's going to deteriorate this cap from the bottom up?

MR. NOVAK: No. No. The ground water that we found out there is anywhere from fifteen to twenty-five feet down, and we're putting this cap over the top. So typically ground water moves downward, not upward. And it's moving away from the site.

QUESTION: What I'm talking about is anything that goes down there or whatever, if it decides to go up.

MR. NOVAK: There's not a real great likelihood of that happening.

MS. LaFAIRE: Holly just said they tested for hot spots as well.

MS GREJDA: On the surface they did soil samples to see if there were hot spots, certain areas where there might have been chemicals closer to the surface, and hot spots weren't detected during the sampling. So that would indicate that the integrity of the cap would be okay.

There wasn't a hot spot of contaminants close to the surface.

MR. NOVAK: The contaminants that we found were pretty much all over the entire length of the surface where we sampled. So Holly is correct. We didn't find any highly concentrated areas which might lead to maybe digging that particular portion up and getting rid of it. We didn't find any of that.

QUESTION: You say they're twenty-five feet down?

MR. NOVAK: The ground water that we found is anywhere from fifteen to twenty-five feet down from the top.

MS. LaFAIRE: Question?

QUESTION: Who does this land belong to? I know it used to belong to us. Who does it belong to now?

MR. NOVAK: Uniroyal, through a trustee.

QUESTION: And in thirty years can this be re-sold, or ten years from now somebody can buy it? Can the State release this land to somebody before thirty years or anything like this?

MR. NOVAK: One of the other components of the remedy is going to be deed restrictions. We're going to place restrictions on the deed so that it can't be developed and you can't go out and sink ground water wells, you can't go out there and dig a swimming pool or anything like that.

There will also be those restrictions so they can't do anything with it.

MS. LaFAIRE:: More questions?

QUESTION: Is Uniroyal totally off the hook for Chapter 7?

MR. NOVAK: What we found so far is that there's three parts of this Uniroyal bankruptcy. One of the components spun off and they're gone, and they paid EPA about $1 million to satisfy their liabilities based on not only this site but other sites of their's as well. So that one's gone.

The other one that's going through Chapter 7 right now is -- they have given -- as part of that settlement they've given the government a number of shares of their stock which the government is going to sell probably later this summer to give us some additional money which, hopefully, we'll be able to apply to this site. Because this is their problem.

And then the third one which is -- it is going to reorganize, and according to the terms of the bankruptcy settlement -- and this is something that I'm not completely versed in -- but we can't go after that particular entity because of the terms of the agreement. But they're going to end up -- they paid about $1 million to us so far to satisfy some of their liability, and then

we got about 360,000 shares of their stock which, hopefully, we'll be able to convert into cash so EPA doesn't have to foot the entire bill for it.

MS. LaFAIRE: More questions?

QUESTION: I spoke with Dion earlier this week about the mailing list, and I was wondering what you're going to do about it to make sure people get the information?

MS. GREJDA: Yes. A couple of people mentioned to me that they didn't receive this fact sheet. And what I'm going to do is fax the list that I get tonight, I'll fax it to my contractor who is in Milwaukee, and I'll have him check it against the list that he had so that we know. Because I made a notation of some people that had already mentined that to me as well.

Actually, that's a good point. If you didn't receive this fact sheet and you signed up on the list, if you put like a little asterisk next to your name then I'll know especially to ask for those names to make sure they're on the list.

QUESTION: And the other thing is getting the word out to other people who don't know. I talked to Dion, and I pointed out that I talked to some new neighbors and one of them had no idea that this was even going on. And how are you going to get the word out to those people who don't -- who are in the dark still about it?

MR. NOVAK: Thank you for doing that. One of the things, as I mentioned a little while ago, is I'm going to come out and probably go door to door in the area, knock on the door, say, "Hi. We're from the government. This is what you need to know about what's going on." And if they're not home we'll put it in the mailbox so that we will then at least be able to get it directly to them.

MS. LaFAIRE: That is a problem we have. I have in my chair a stack of -- about this thick (demonstrating), if not thicker, of fact sheets that came back to me because we will do things like send out blanket mailings according to the post office, or streets, or what have you, and me getting this much back tells me this much is not effective. So it's kind of like a process. So if -- for instance, if you know people -- if you live near interested people, and you know that they are interested, if you could just give them the 800 number from here (indicating) and let them call in and give Dion or myself their address that would be great, too. You know, we often will ask people to help us as well, because we're sometimes going blind with this ourselves in trying to get the word out.

MR. NOVAK: What makes this a little unique is that we're doing everything as quickly as we're doing it. When we typically deal with sites like this, we encounter

situations like this, we have more time to fully develop our mailing list. Because we're going as fast as we can, which is great, we're having to do things more quickly than we typically do. So that's why we're probably going to come out and go door to door, just so we can reach everybody that we need to reach.

MS. LaFAIRE: Right. And usually at this part of the process, too, we'll do a revision to the Community Relations or Community Involvement Plan, you know. And that entails a lot of this kind of stuff, trying to figure out where we should be going with all of this. So, yeah, if you know people -- if you can suggest a block that we should be adding to the mailing list, or what have you, make a little notation on that sheet to me and then put your phone number and maybe myself, Dion, or the guy I work with, can give you a call and you can help us out.

QUESTION: He really sent me some fliers and I passed them out.

MS. LaFAIRE: That's great.

MR. NOVAK: One of your neighbors called -- from one of the new houses there -- he called me the other day and I called him back. Unfortunately, I couldn't connect with him.

QUESTION: I'm here.

MR. NOVAK: Great. One of the things -- and this is

how we reach as many people as we can. One of the things that I did, I work with Eric Michael (phonetic) from the St. Joseph County Health Department. He sent me a street list of all of the area that we need to include here, and then I took addresses off of that list. Now, granted, you said there's new homes over there, so we need them as well. But that's how we typically go about getting our list together and getting as many people informed as we can. Since this area needs to be included in this -- we're proposing to include it in this city water extension obviously we need to get as many of these people involved as we can so they know what's going on.

MS. LaFAIRE: Thanks for doing that. If you know anybody knows anybody that didn't get this information, and they need it, feel free to take extra fact sheets up at the front.

QUESTION: Do we have fact sheets from the last meeting?

MR. NOVAK: No, we didn't put any fact sheet out of that. We just sent out a little letter saying, "Please come to the meeting," because it was more of an informational type meeting. "This is what's going on." We will put out fact sheets from time to time, yes. I find it's a little -- I find in my experience, I been doing this for about ten years, it's a lot better to do

things this way, because you actually see people and tell them what you're doing face to face rather than sending them a letter which they may or may not read. We do combinations of that.

QUESTION: What is the legal basis for the demand you relinquish your right for remonstrance on annexation? What does that have to do with the supply of water?

MR. NOVAK: The cities of South Bend and Mishawaka have made -- we've asked them to provide filtered water from their water supply, and that was one of the requirements. They said we had to sign this agreement.

QUESTION: Is that in a statute?

MR. NOVAK: I don't believe it's in a statute, no.

QUESTION: I thought it was. I thought it was a State law.

MS. GREJDA: It's a County. It isn't a State law. It would be a County or a City ordinance.

QUESTION: They said it was a law or ordinance that if you received the city services you should sign this agreement.

MS. GREJDA: Elkhart County they will do it without remonstration. But it depends on the community. And so South Bend and Mishawaka require remonstration.

MR. NOVAK: Keep in mind that that particular phase of this cleanup is entirely voluntary on your part. We're

not going to force you to do it.

QUESTION: I understand that. But it just seemed like it didn't coordinate there.

MR. NOVAK: That's one of the things that they asked in return for providing the water.

QUESTION: It's two different problems.

QUESTION: At the last meeting Hagey and Linda Street they were talking about looping the water, running one off Mishawaka and then at a future time switch a valve into South Bend. Has that been figured out yet exactly what's going to happen?

MR. NOVAK: No. We're designing the system now. So we're still in the process of figuring that out. That's still my understanding. You remember Ken from the last meeting. That's what he told me, and that's still the assumption that we're working under. So that the City of Mishawaka [redacted] Those are details that still need to be finalized.

The next three redactions on this page are non-responsive

QUESTION: How far ahead do you mail these out?

MS. LaFAIRE: Typically ten working days.

MR. NOVAK: Couple weeks.

QUESTION: Because we do not live in our old residence which is where this site is, and we didn't get a

letter in the mail --

MR. NOVAK: At your new residence?

QUESTION: (continued) -- that said there was going to be a meeting. So immediately -- luckily we had the wherewithal to be able to come to the meeting. But it wasn't any demonstration -- we searched through the paper and there was not public notice in the paper.

MR. NOVAK: There was one last Thursday and a week ago last Thursday. That's when we had our ads. But we need to take care of that. Give us your new address again and we'll double check and we'll make sure. I apologize for that.

QUESTION: I'm a little concerned when you start tearing down the trees and whatnot. I'm really concerned about the wildlife that's currently there now that's growing there now, mainly the live roses. Is there anything that can be done to contain them?

MR. NOVAK: That would be nice to be able to say, "Yes, we can to that." I don't know if I can tell you that, though. Maybe we can grind them up with all the trees. I don't know.

But we have to get rid of all those trees and shrubs, because otherwise that would damage the cap we're putting over the top and we couldn't tell you it's going to last for a while.

QUESTION: Is it possible when you come door to door giving the progress that has been made up to date to put a time element on completing what you're going to tell us at that time?

MR. NOVAK: Sure. We are going to be done with this city water line extension.

QUESTION: Each one of the --

MR. NOVAK: Oh. Yeah. We're going to have to -- a lot of that's going to depend on when they get started, how many people signed the agreements right away, where the people who signed the agreements are. And we're not going to go and do one house over here then do one over there. We're going to try to do streets at a time.

QUESTION: If you have to put in a fictitious date, we'll say, within two or three months even, you could come up with a timetable?

MR. NOVAK: I'm not going to tell you anything fictitious, but I will tell you -- yeah, we'll give you an approximate schedule. And then as it gets closer we're going to say, "You're on tab for next week." And we will give you ample notice for that. We're not going to tell them anything fictitious.

MS. LaFAIRE: More questions?

QUESTION: When you put the cap over the site what is to prevent the ground water from seeping into that from

the area around it -- surrounding it if you don't do anything surrounding the site?

MR. NOVAK: One of the things we're going to do is once we put the cap over the top any rainwater that comes off the slope of that to the areas around the site itself is going to be rainwater that's falling out of the sky. It's not going to come into contact with the waste in the landfill.

What we're also going to do is as it comes down -- think of this as like an inverted bathtub. And if you got a concave surface at the top and when the water comes down it's obviously going to seep off in all directions. What we're going to do is we're going to have ditches around the site to help to convey that water which is going to be rainwater away from the site itself. So that it's going to be rainwater that's going to be migrating off the top of the cap.

MS. LaFAIRE: Also I think, just to clarify a little bit, the cap will cover all of the contaminated soil. So anything around the cap will be soil that's not contaminated. And the problem usually with these sites is the reason the contamination gets down into the ground and into the water table is because, and I likened it to this before, it's kind of like a coffee filter. You know, water comes down through the grounds and then you get

coffee out the bottom. Well, if you have water going through just filter without the ground you wouldn't get the black water, or the coffee, coming through. So, in other words, when the rainwater comes down if it goes through the contaminated soil it gets ook down into the water table. But if it goes down around the site where there's no contaminaton there will be no ook come through.

QUESTION: Excuse me. To follow up on her question, I'm not sure that you really answered her question. I'd love to hear a full response. The depth the water has been reported is fifteen to twenty feet. The depth of the landfill has been reported as thirty feet at many locations. Which means that even with your cap you're going to have ten to fifteen feet of your landfill under the ground water with ground water continuing to pass through it. And I believe that's where the question comes from. How are we dealing with containing the source of the ground water?

MR. NOVAK: That's going to be the next phase of the cleanup, the ground water. That will take care of that. That will contain that in a way that keeps that away from the site.

QUESTION: So that will be free forever?

MR. NOVAK: Yes. Just as long as the cap is there.

QUESTION: Not as long as the cap's there but

forever, because you have a continuous source there for the next two or three hundred years.

MR. NOVAK: Whatever the remedy is, whether we're going to pump the ground water out of the ground and treat it, whether we're going to contain it in some other way, yes, it will be there.

QUESTION: Is that the hope? I didn't know how to ask that. That was my question.

MR. NOVAK: Sorry we didn't get to that. But, yes, that's why we have three phases to cleanup, to address all of the ways that the contamination can be moved away from the site. Our ultimate goal once we're all done is to say, "This contamination is all isolated right here and covered."

MS. LaFAIRE: Thanks for clarifying that.

QUESTION: What kind of loop are you going to put in the water line so that the person on the end of the line don't get all of the sediment?

MR. NOVAK: That's something that they're going to have to design. I don't know exactly what it's going to be yet. But we'll obviously tell you that when we come out so that that water quality will be good for everyone. The reason that they're putting the loop in is so they don't have to have a lot of fire hydrants they have to flush out, so that the quality of the water is going to be

better. That's why they're doing it that way.

MS. LaFAIRE: More questions? Okay. There was a comment -- there was a sign up sheet that had listed comments on the top of it. And I don't believe there are any names on that sheet. But if -- would you like to give a comment -- an official comment?

QUESTION: Yes.

MS. LaFAIRE: At this point what we're going to do while Dion is running to get a glass of water is call an end to the questions and answers. If you have more questions and answers after we officially call an end to the meeting, and the court reporter stops typing, then we'll still stay here and answer your questions. But at this point in time what I'm going to do is, if you have a comment or official comment that you'd like to tell us that can get recorded into our record here tonight, please stand up and clearly give us your name and address so that we can list it as part of the official record before you give your comments, and then clearly state your comments so the reporter can hear it.

QUESTION: I have a question on the comments.

MS. LaFAIRE: Oh, sure.

QUESTION: What do you want, comments of consensus. Do you want an addition to comments?

MS. LaFAIRE: The comments can be anything.

QUESTION: Well, I just wanted to know if you wanted to know that people approve of this or whether they don't, or do you just want to hear negative comments?

MS. LaFAIRE: Oh, no, no, no. Negative comments -- I mean, negative, positive, whatever you want to tell us. Positive as well. We would like whatever you feel about this. If you think that the recommended alternative that we have here is the way to go, let us know. If you think part of one alternative mixed with another is the way to go, if you like what we're saying, tell us. If you don't like it, tell us. Whatever you think about this. We want your opinion, is basically what it is.

MS. GREJDA: It's important to keep your comments to the Phase 2, which is the landfill cap, because that's what we're taking comments on this evening.

MS. LaFAIRE: Right. This is the portion that we're looking at. Soon as we have Dion back here we'll get to that.

(Short recess taken)

MS. LaFAIRE: Okay. Sir?

COMMENT: My name is Christopher Huff. I'm Director of the Department of City Planning, City of Mishawaka, 600 East Third Street, Mishawaka, Indiana 46544.

I have a couple comments.

First of all, we are working with the EPA and

will continue to do such on water line extension in coordination, of course, with the City of South Bend to make sure that it's all done properly for everyone involved.

In terms of Phase 2, the capping of the landfill, I reviewed the Proposed Plan for Remedial Action and Focus Capability Study on file at the Mishawaka-Penn Public Library. It's quite a work of art, and I bow to your efforts in that regard. The City of Mishawaka also through its Waste Water Department has reviewed it, specifically Carl Kopec.

The City of Mishawaka would join with the State of Indiana in support of Alternative 4B, the composite barrier cap with a GCL soil barrier layer. We feel that that is the most appropriate and timely, probably the most cost effective, way to take care of the problem.

I am going to take a little bit of liberty in terms of Phase 3. You do need to work very closely with the Waste Water Department if you're going to be pumping water out of the ground. Based on some of the estimates of gallons per minute, if all of that goes into the Mishawaka waste water treatment plant that could take up as much as 10% of available capacity of the waste water treatment plant. So I -- that's just for your future planning requirements.

And also, I would be more than happy to get you a map of the Indiana East-West Toll Road so you could fly into Mishawaka.

MS. LaFAIRE: Thank you. Are there any other comments? Go ahead.

COMMENT: My name in Steve Sullivan. I live at 1728 Hass Drive, in South Bend. I'm also a faculty member at Notre Dame, and I teach ground water and contacted you recently. I would also like to compliment the initial reports. And as far as reduction of surface risks, I think the alternative looks very good. I also have concerns, however, when we get to the ground water portion of it. I will try to address those in three areas.

Number one, and taking a slight bit of liberty and getting towards Phase 3, plus they're closely related, there was a question about multiple plumes. And the response was that you don't really know where those are from. I suggest that your hydraulic data can tell you where it's from.

During the late summer part of the year, at least according to one of your data sets, there is in fact a very significant gradient towards the northwest. So the plume is in fact going through oscillations during the summer. You may want to look at that and see where that takes you.

Within those same hydraulic data there is a vertical gradient plume up into the plume, at least according to one of your wells. I'm not sure that you are ready to simply cap a site and hope that the ground water problem will not become even worse under those circumstances. Perhaps a little bit of study, a little bit of numerical modeling to try and determine the vertical fluctuation of the water table and whether there's up flow or whether there's down flow, may benefit you significantly in trying to design a cap and to facilitate Phase 3 as well.

The second area is a question of whether reduction in the percolation is in fact significant. If you use your report, you have a model in there that under the no alternatives or the no -- what did we call it -- do nothing alternative, I guess is the word I'm looking for, the model predicts that about 900,000 cubic feet per year of water going down through the landfill. If you use the numbers from the report, which are about 600, 700 feet per year lateral ground water flow, we use about fifteen feet of vertical saturated thickness. Which may be conservative. We used the 2400 feet north-south dimension of the landfill, and we used porosity of about 30%, you'll find out that you get about 6,000,000 cubic feet per year of ground water flow through the landfill. And that's

assuming that there's no changes in that and that the ground water in fact is not deviated into the landfill.

Therefore, the proposal seems to pick up only about 10-15% of the water that is in fact moving through the landfill. Perhaps a consideration you might want to look at.

Thirdly, going back to the question that was asked about ground water, again this ties a little bit into Phase 3. But simply capping this system where we have ground water that we know is flowing through the landfill sets up an extremely long Phase 3 portion of this work. Because we know that water will continue to move through the contaminants and will continue to pick up the contaminants essentially forever. So there may be some justification here to move away from standard practice and perhaps look at some type of slurry well or some type of isolation of this site so we have less ground water flow bubbling through it. Thank you.

MS. LaFAIRE: Other comments? If not, at this time, then, I will call an end to the official oral comment portion of the meeting. I want to thank everyone for coming. I want to thank the people who commented for your comments. We appreciate that. If you have anything else to tell us about the information we've presented to you tonight, the information we have presented in the proposed

plan, please do so. And once again I want to remind you there's a comment sheet in the fact sheet that you have either had mailed to you or it's in the front of the room. Please feel free to pick one up if you don't have one. Feel free to fill these out and mail it to us.

The comment period will continue until April 24th. At that time what we'll do is we'll respond to the comments we received tonight at this meeting, we'll also respond to any written comments, in the document called Responsive Summary. We'll take all of this information into consideration. And after that point in time a decision will be made about the landfill cap in this portion of the project, and we will let you know by placing -- well, we'll usually send out a letter or another fact sheet, or something like that, to let people know what's going on with this. And also we'll place the Responsive Summary and all the other documents as they come out in the information depository for you to review.

So thank you all for coming. As we get information on this site we'll be here again. So you'll see us again. And if any of you have any questions after this, we're here.

MR. NOVAK: The people who don't come to the meeting tonight, any of your neighbors who want to give any input to this proposed plan, they don't have to use this

particular form. They can just write a letter to Mary Ann and send it in. So the people who aren't here can still make comments on it, anybody.

MS. LaFAIRE: That s it. Thank you.

(Meeting adjourned at 8:15 p.m.)

C E R T I F I C A T E

I, Mary J. Rummel, being a shorthand reporter and Notary Public in and for the County of St. Joseph and State of Indiana, do hereby certify that I did report in machine shorthand the foregoing United States Environmental Protection Agency Public Hearing regarding the Douglas Road Landfill Superfund Site, held at Walt Disney Elementary School, 4015 North Filbert Road, Mishawaka, Indiana, on April 5, 1995, commencing at 7:00 p.m., and I believe the foregoing is a true and correct transcription of my said stenographic notes.

Mary J. Rummel
Court Reporter

Dated: April 28, 1995